

LISTING OF CLAIMS:

1. (Currently amended): A display device comprising an array of pixels, each pixel comprising a thin film transistor switching device (14) and a display element (16), the array being arranged in rows and columns, wherein each row of pixels shares a row conductor (10), which connects to the gates (14a) of the thin film transistors (14) of the pixels in the row, wherein row driver circuitry (30) provides row address signals for controlling the switching of the transistors (14) of the pixels of the row, wherein the row address signals each comprise a waveform (42, 44) for ~~proving~~ providing an ON gate voltage and an OFF gate voltage to the drive transistor (14), wherein the device further comprises control circuitry (50) for shifting the ON gate voltage and the OFF gate voltage in dependence on drive and/or environmental conditions, the control circuitry (50) maintaining a constant difference (39) between the ON gate voltage and the OFF gate voltage.
2. (Original): A display device as claimed in claim 1, further comprising a temperature sensor (54), and wherein the control circuitry (50) shifts the ON gate voltage and the OFF gate voltage in dependence on temperature.
3. (Original): A display device as claimed in claim 2, wherein the ON gate voltage and the OFF gate voltage are both higher for lower temperatures than for higher temperatures.

4. (Previously presented): A display device as claimed in claim 1, wherein the control circuitry (50) shifts the ON gate voltage and the OFF gate voltage in dependence on the display device refresh rate.

5. (Original): A display device as claimed in claim 4, wherein the ON gate voltage and the OFF gate voltage are both higher for higher refresh rates than for lower refresh rates.

6. (Previously presented): A device as claimed in claim 1, wherein each column of pixels shares a column conductor (12) to which pixel drive signals are provided, and wherein column address circuitry (32) provides the pixel drive signals.

7. (Previously presented): A display device as claimed in claim 1, comprising a liquid crystal display.

8. (Previously presented): A display device as claimed in claim 1 further comprising means for compensating for kickback.

9. (Previously presented): A portable device (70) having a display device (72) as claimed in claim 1.

10. (Original): A row driver circuit for an active matrix display device for providing row address signals, in which device each pixel comprises a thin film transistor (14) switching device

and a display element (16), and the row address signals are provided to the gates (14a) of the thin film transistors (14) of the pixels in the row, wherein row driver circuit comprises:

means (30) for providing row address signals comprising a waveform for providing an ON gate voltage and an OFF gate voltage to the drive transistor,
an input for receiving a control signal (52) dependent on drive and/or environmental conditions; and

means (50) for shifting the ON gate voltage and the OFF gate voltage in response to the control signal (52), and maintaining a constant difference between the ON gate voltage and the OFF gate voltage.

11. (Original): A method of generating row address signals for an active matrix display device, the method comprising:

providing row address signals (42, 44) comprising a waveform for providing an ON gate voltage and an OFF gate voltage to the drive transistors (14) of the pixels in a row, and shifting the ON gate voltage and the OFF gate voltage in dependence on drive and/or environmental conditions whilst maintaining a constant difference between the ON gate voltage and the OFF gate voltage.

12. (Previously presented): A method as claimed in claim 11, wherein the shifting is in dependence on temperature.

13. (Previously presented): A method as claimed in claim 11, wherein the shifting is in dependence on the display device refresh rate.

14. (Previously presented): A display device as claimed in claim 1, wherein the control circuitry shifts both of the ON gate voltage and the OFF gate voltage.

15. (Previously presented): A display device as claimed in claim 14, wherein the control circuitry shifts both of the ON gate voltage and the OFF gate voltage by applying a DC voltage to a common electrode.

16. (Previously presented): A row driver circuit as claimed in claim 10, wherein the means for shifting shifts both of the ON gate voltage and the OFF gate voltage.

17. (Previously presented): A row driver circuit as claimed in claim 16, wherein the means for shifting shifts both of the ON gate voltage and the OFF gate voltage by applying a DC voltage to a common electrode.

18. (Previously presented): A method as claimed in claim 11, wherein the shifting step comprises shifting both of the ON gate voltage and the OFF gate voltage.

19. (Previously presented): A method as claimed in claim 18, wherein the shifting step comprises shifting both of the ON gate voltage and the OFF gate voltage by applying a DC voltage to a common electrode.

20. (New): A display device as claimed in claim 1, wherein the control circuitry shifts amplitudes of the ON gate voltage and OFF gate voltage in dependence on drive and/or

environmental conditions, the control circuitry maintaining a constant amplitude difference between the ON gate voltage and the OFF gate voltage.